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%Male Rat Lung
%Simulates the posterior mean parameter values from the MCMC analysis
%Plots simulation against the in vitro data

prepare @all
MaleData
kk = [];
fkk = [];

set @format = longe;

VVIAL= 0.0119573;
VMED= 0.001;
VINJ=0.0003858;
VAIR=VVIAL-VMED;
TSTOP= 0.825; TF=0.; TI=0.2;
PROT = 1.0;
P1=0.69;

RLOSS = 0.001424 ;
CINT = 0.001 ;
MAXT = 0.001 ;

%Male Rat lung

for pp = 2: 3
    A10 = FratMLung(1, pp)'*(VAIR+P1*VMED);
    VMAX1= 0.0 ;
    KM1= 1.0 ;

%MCMC Redo
VK = 0.00025 ;
KG1 = 0.45 ;
start @nocallback

    kk = [kk, _ca1];
end % end of dose loop

%Time 10 ppm      1000 ppm
mrlng = [...
0      0.35539      25.32864
0.025  NaN        22.91037
0.2      0.35837      23.63745
0.225  NaN        21.88005
0.4      0.32775      21.87599
0.425  NaN        20.57444
0.6      0.30365      20.39321
0.625  NaN        19.09318
0.8      0.28394      19.59958
0.825  NaN        17.86323];

plot(_time, kk(:,2), _time, kk(:,1), mrlng(:,1), mrlng(:,2), mrlng(:,1),
mrlng(:,3), 'mrlng.aps');

```

